

Diamond Rings or Dumbbells: Controlling the Structure of Poly(ethylene glycol)-Fullerene [60] Adducts by Varying Linking Chain Length

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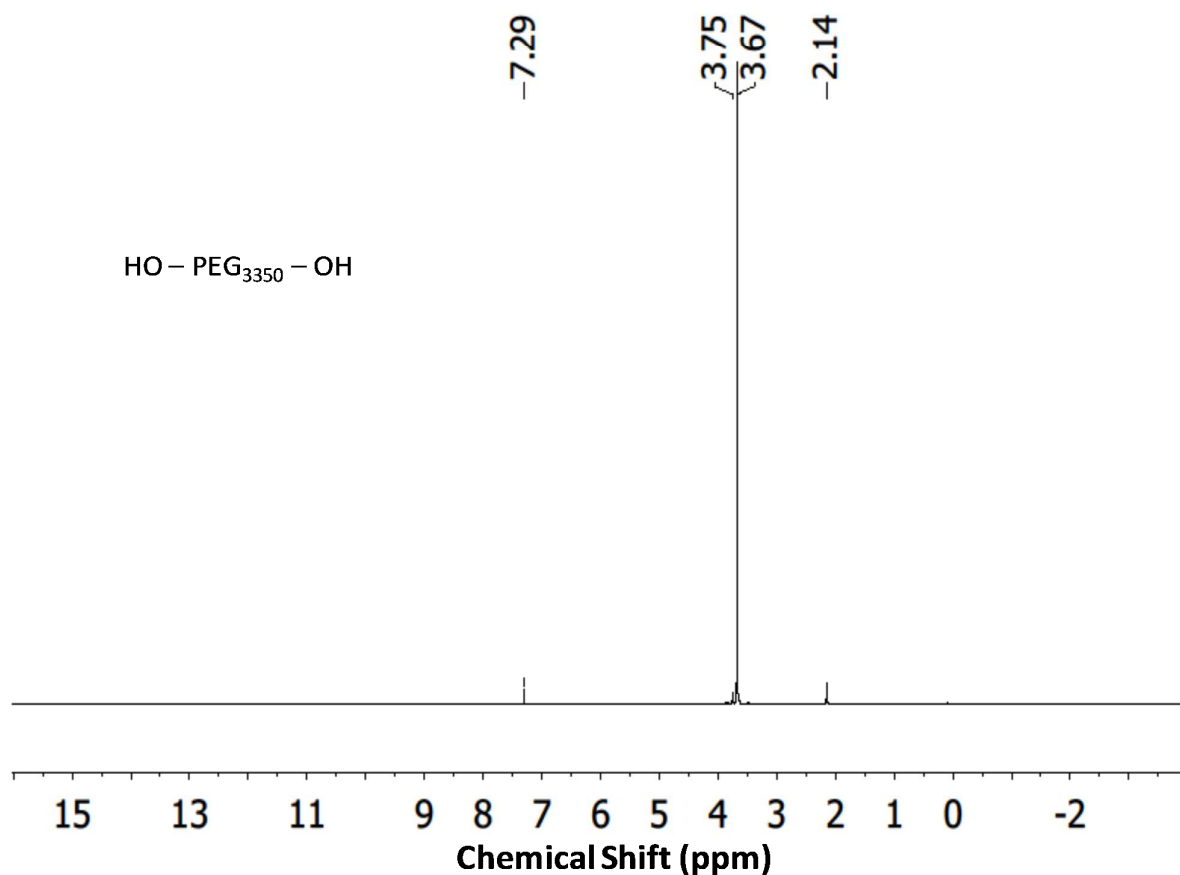


Figure S1. ^1H NMR spectrum of $\text{HO}-\text{PEG}_{3350}-\text{OH}$.

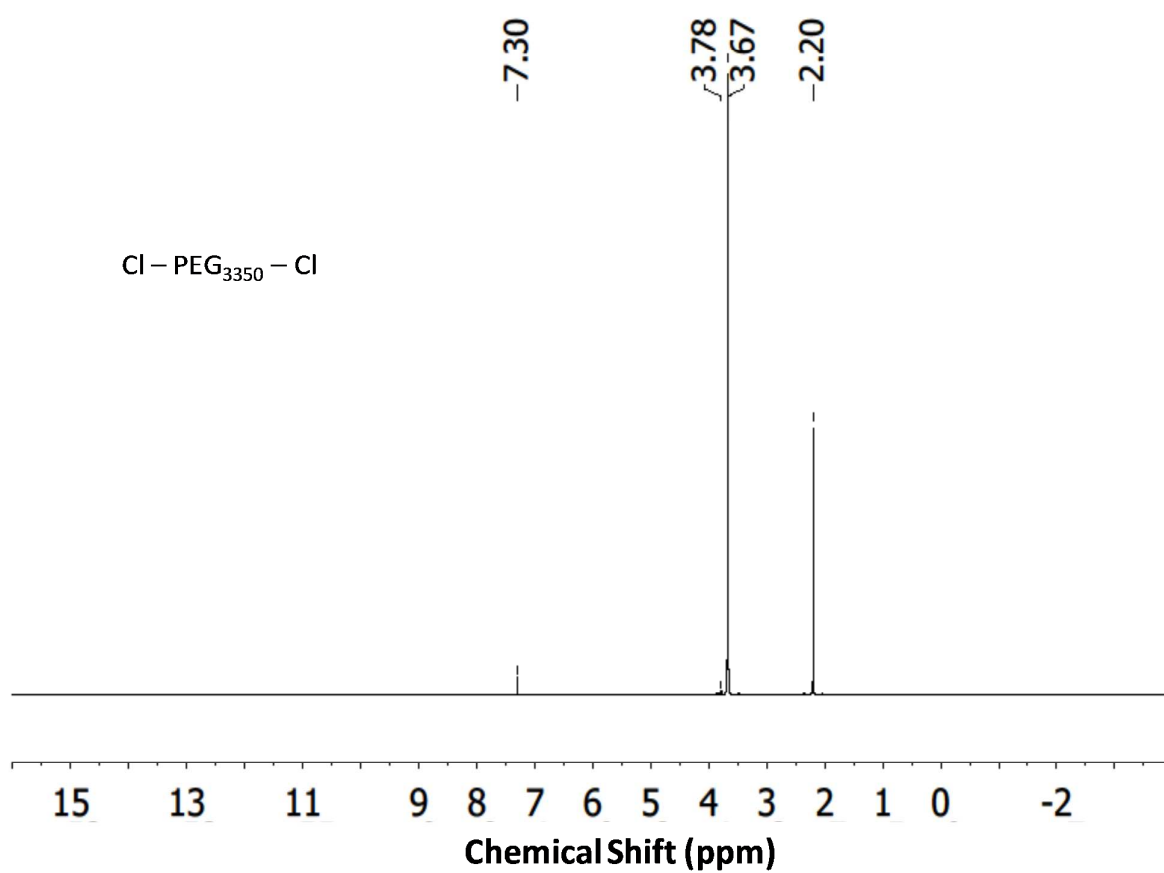


Figure S2. ¹H NMR spectrum of Cl-PEG₃₃₅₀-Cl.

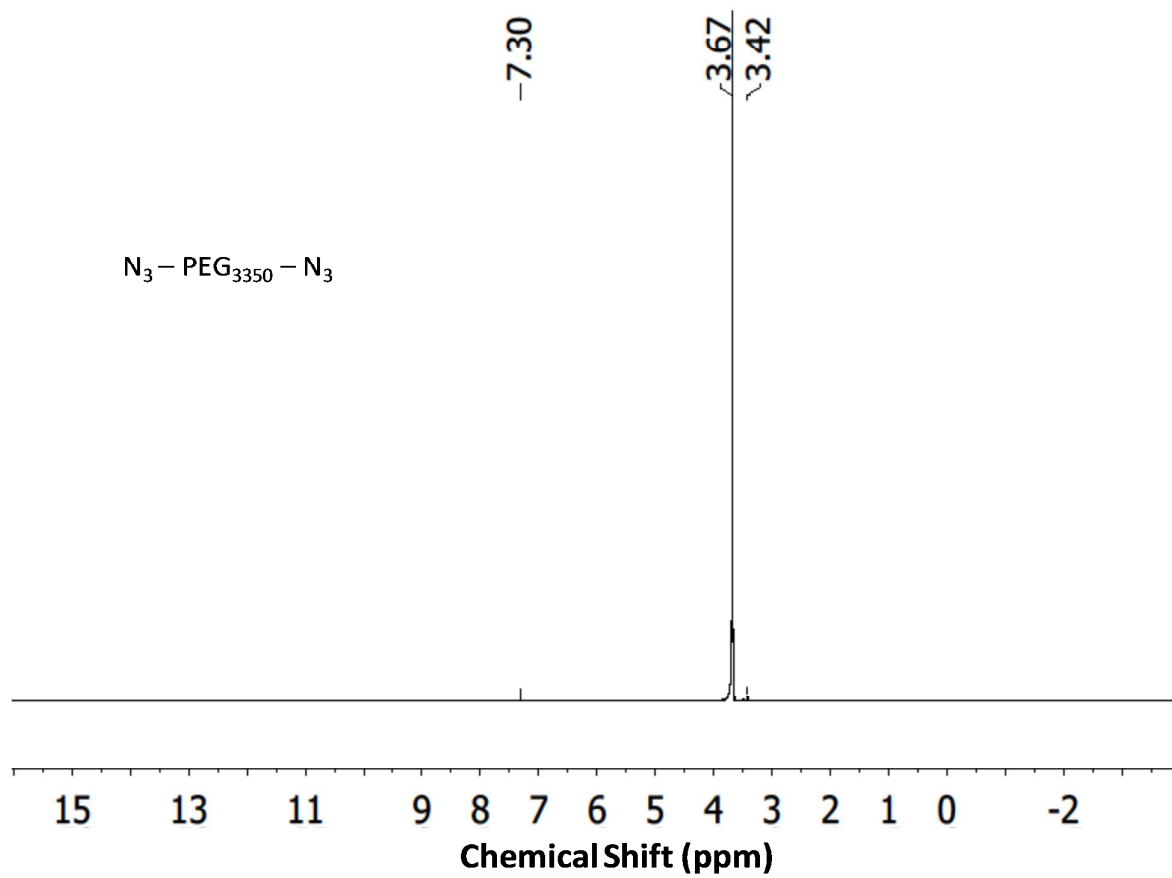


Figure S3. ^1H NMR spectrum of $\text{N}_3\text{-PEG}_{3350}\text{-N}_3$.

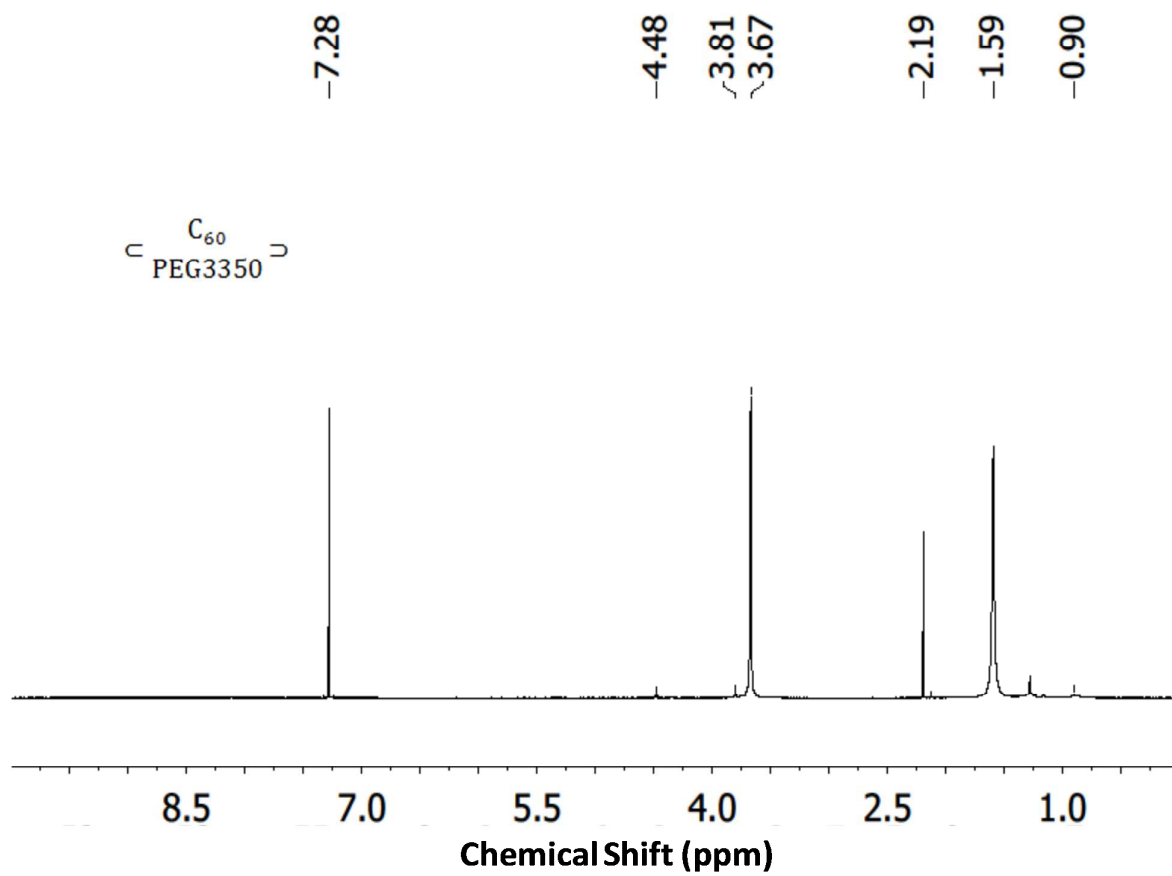


Figure S4. ¹H NMR spectrum of $\text{C}_{60}\text{-PEG3350}$.

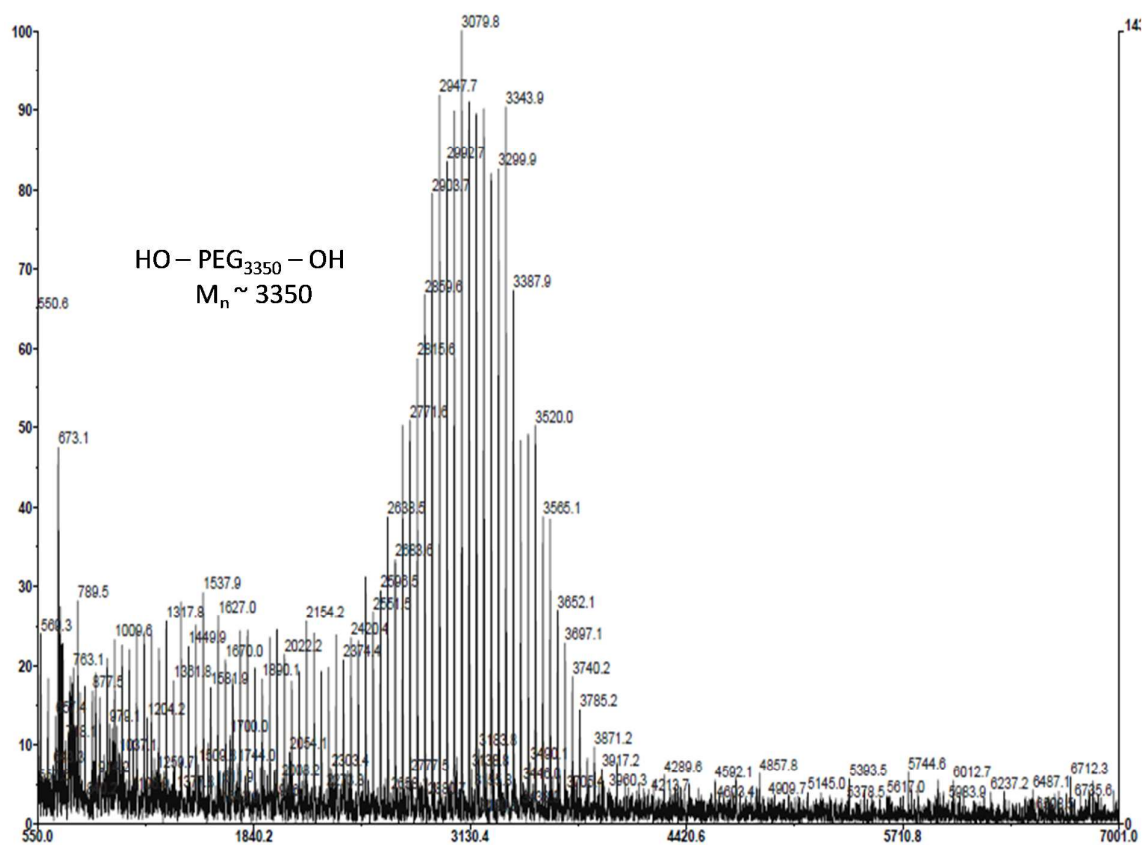


Figure S5. Full positive ionisation MALDI-TOF spectrum of HO-PEG₃₃₅₀-OH (M_n ~ 3350) using *trans*-2-[3-(4-*tert*-butylphenyl)-2-methyl-2-propenylidene]malononitrile as matrix.

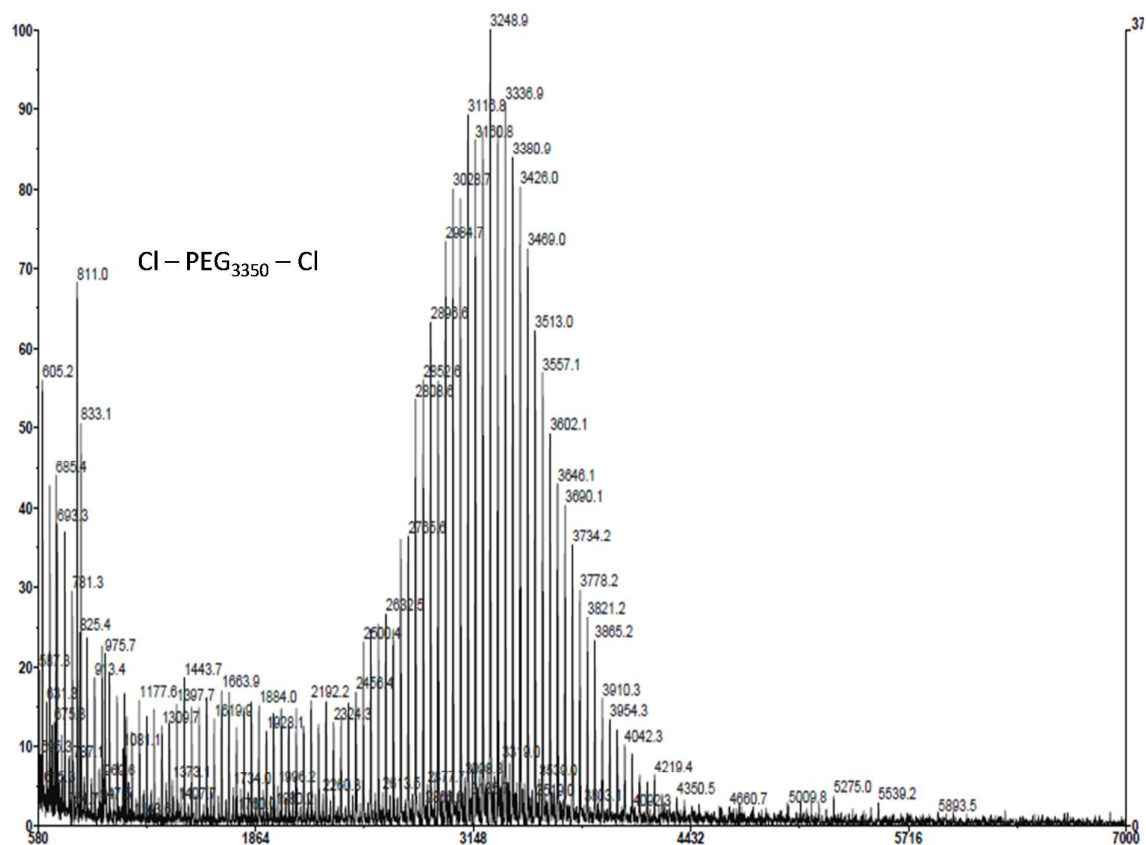


Figure S6. Full positive ionisation MALDI-TOF spectrum of Cl-PEG₃₃₅₀-Cl using *trans*-2-[3-(4-tert-butylphenyl)-2-methyl-2-propenylidene]malononitrile as matrix.

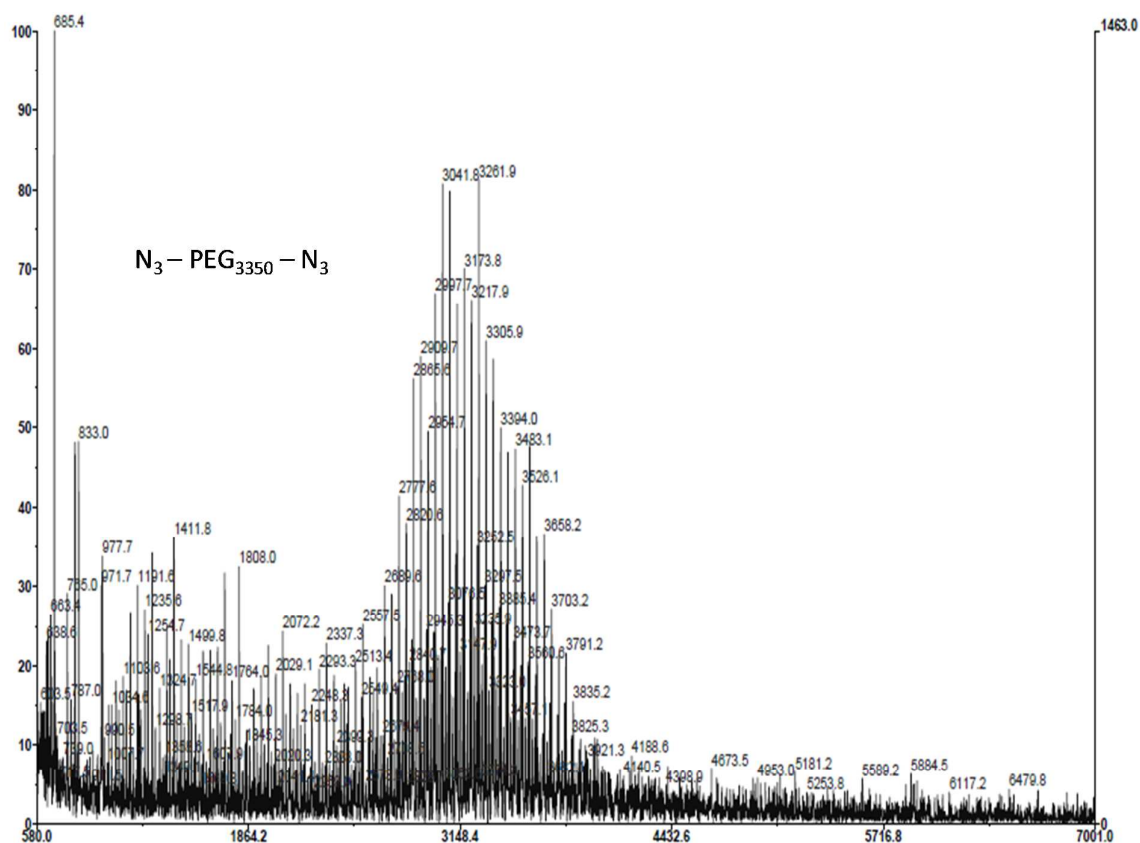


Figure S7. Full positive ionisation MALDI-TOF spectrum of $N_3-PEG_{3350}-N_3$ using *trans*-2-[3-(4-tert-butylphenyl)-2-methyl-2-propenylidene]malononitrile as matrix.

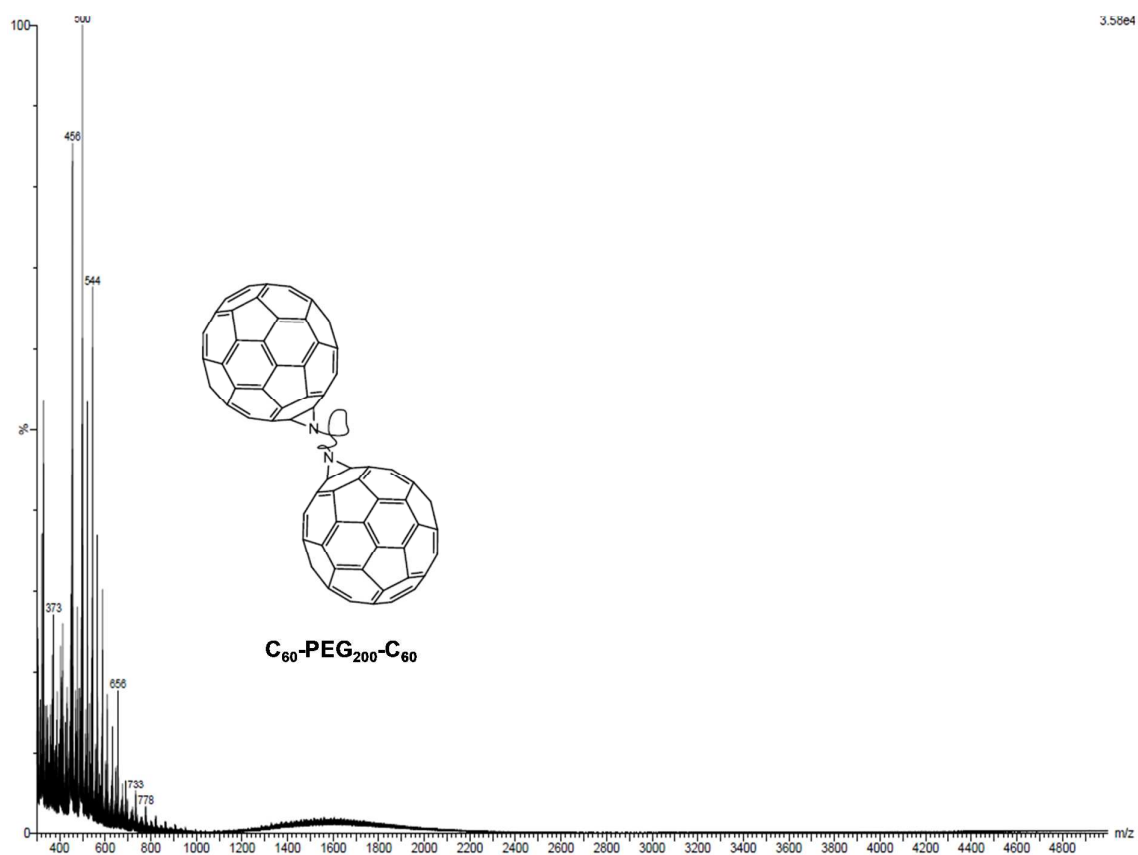


Figure S8. Full positive ionisation MALDI-TOF spectrum of C_{60} -PEG₂₀₀- C_{60} using *trans*-2-[3-(4-tert-butylphenyl)-2-methyl-2-propenylidene]malononitrile as matrix.

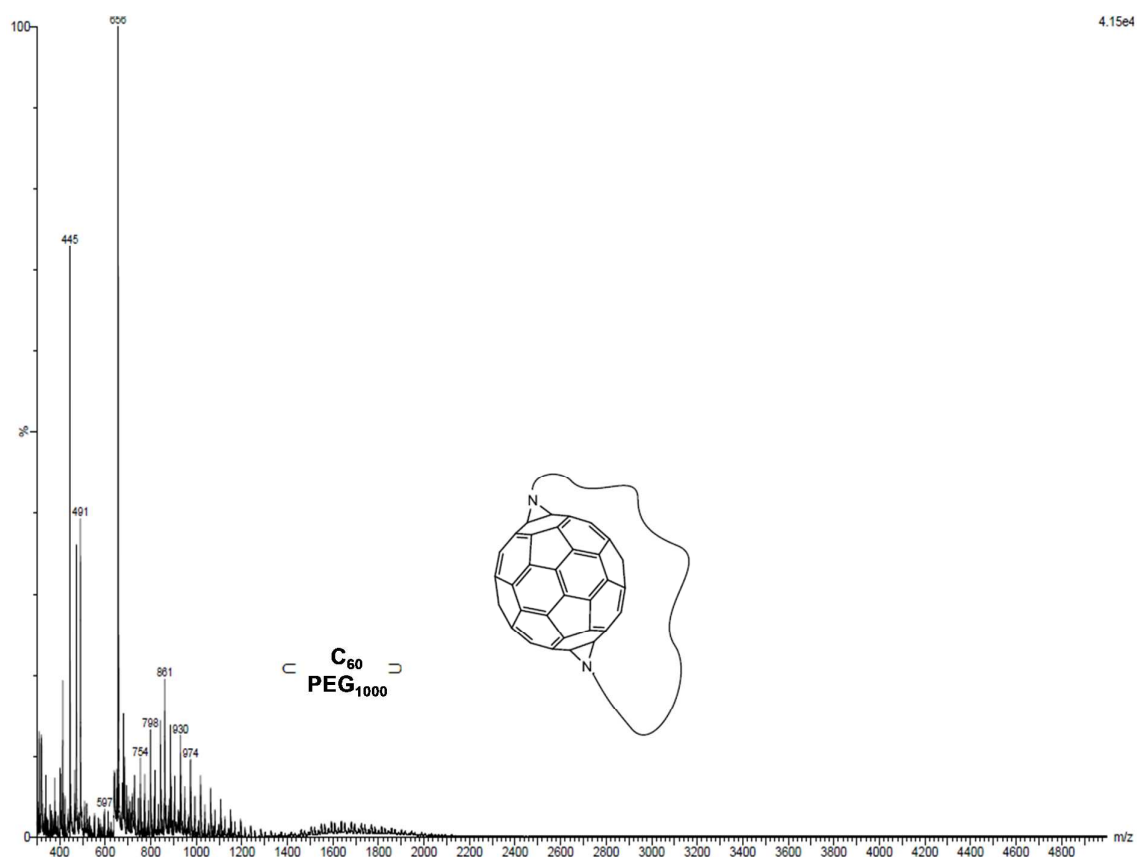


Figure S9. Full positive ionisation MALDI-TOF spectrum of C_{60} -PEG₁₀₀₀ using *trans*-2-[3-(4-tert-butylphenyl)-2-methyl-2-propenylidene]malononitrile as matrix.

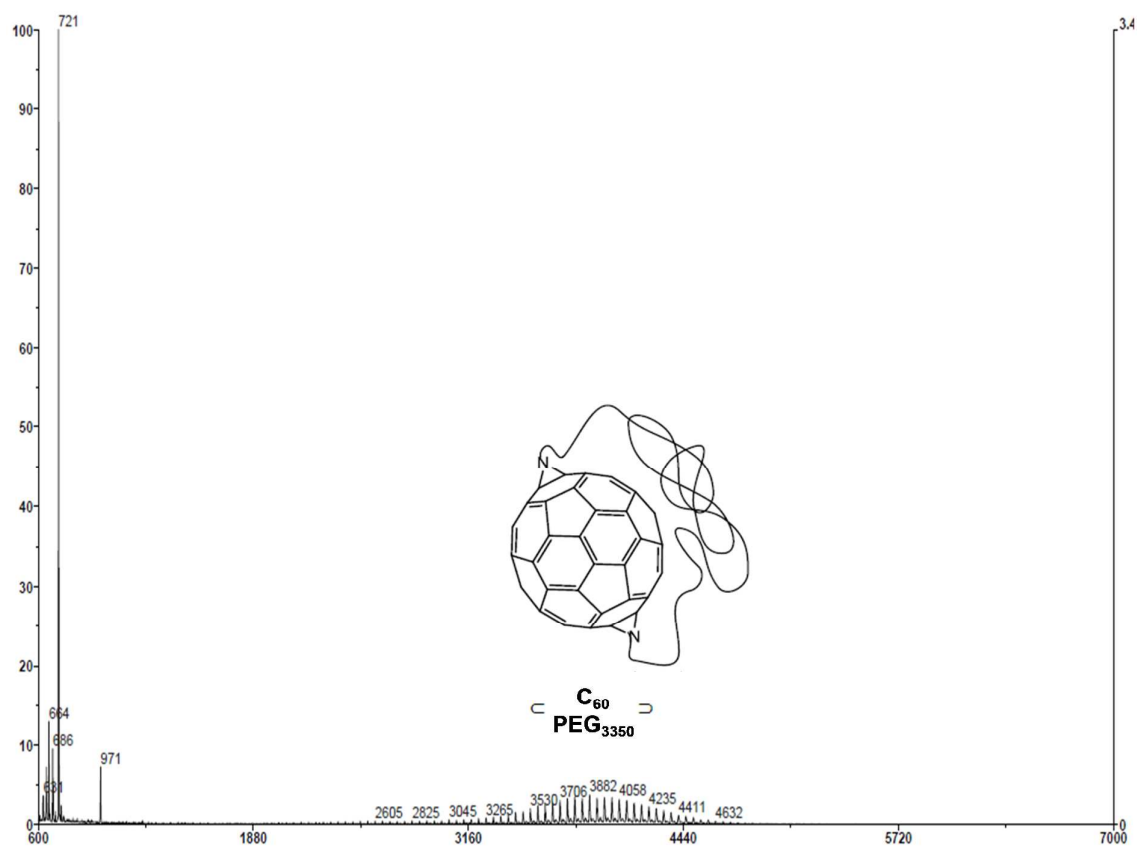


Figure S10. Full positive ionisation MALDI-TOF spectrum of $[C_{60}]PEG_{3350}$ using *trans*-2-[3-(4-tert-butylphenyl)-2-methyl-2-propenylidene]malononitrile as matrix.

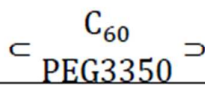
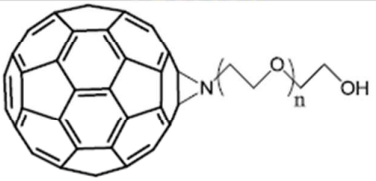
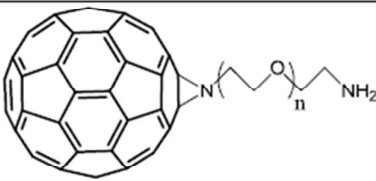
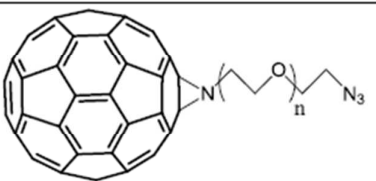
Structure	Empirical formula (65 repeating units + Na ⁺)	Calculated monoisotopic mass (65 repeating units + Na ⁺)	Mass difference to diamond ring C ₆₀ PEG3350
	C ₁₉₂ H ₂₆₄ N ₂ O ₆₅ Na	3660.7310	-
	C ₁₉₂ H ₂₆₅ NO ₆₆ Na	3663.7307	3
	C ₁₉₂ H ₂₆₆ N ₂ O ₆₅ Na	3662.7467	2
	C ₁₉₂ H ₂₆₄ N ₄ O ₆₅ Na	3688.7372	28

Table S1. Comparison of calculated monoisotopic mass (with 65 repeating units) of possible derivatives to C₆₀ PEG3350 with Na⁺ counter ion.